## DAVID J. FARBER

#### PERSONAL INFORMATION

Home Address:

Business Address:



#### EMPLOYMENT\_EXPERIENCE

The Alfred Fitler Moore Professor of Telecommunication Systems, Moore School, University of Pennsylvania (1988 - present)

Research work has concentrated in ultra high speed networking and the implications of that on processor interconnect, protocols and software. This has created several joint study agreements with industrial research laboratories such as Bellcore and the RBOCS (Project Dawn - with MIT), IBM and Bellcore (Project Aurora - with MIT), and to becoming one of the principals of the NSF/Darpa research project in Gigabit Networking and Chairman of the Coordination Committee...

Director of the Distributed Systems Laboratory, University of Pennsylvania (1988 - present)

The DSL is the focus of the research activities in the general systems area of both the Computer Sciences and the Electrical Engineering Departments. The past year has seen extensive physical plant improvements as well as a major revemping of the educational and research programs.

Director of the Center for Networking Technology and Applications, University of Delaware (1987 - 1988)

Professor of Electrical Engineering and Professor of Computer Science, University of Delaware (1977 - 1988)

Research work concentrated in distributed systems with particular emphasis on the integration of software and hardware leading to efficient implementations of such systems. Had been the leader in the creation of a campus network and had spearheaded the foemation of and was the Director of the Center for Networking and Distributed Systems Applications devoted to research in such systems. It was at Delaware that the creation of SODS was undertaken and where the CSNET mail system — MMDF was conceptualized and implemented.

Associate Professor of Information and Computer Sciences and of Electrical Engineering (with Tenure), University of California at Irvine (1970 - 1977)

Created and lead the Distributed Computer System Research Project (1971)—at the time the largest computer research activity funded by the National

Science Foundation. It created the software architecture that has formed the basis for much of the Distributed Systems activities that followed. It had a number of ideas such as Client/Servers, micro-kernal, process migration, message based IPC, contract resource allocation etc. Also conceived and directed the implementation of the first distributed token ring — a forcumer of the IBM Token Ring. The activity transferred its technology into the Darpa work via collaborative efforts with IPTO and MIT.

Founder and Vice President of Research and Planning for Caine, Farber and Gordon Inc. (1970 -)

CFG is a key player in the Program Design Methodology area. Its products — PDL (tm) is widely used in the Aerospace and Intelligence community. CFG was one of the very early creators of advanced software and compiler for micro systems and was the creator of much of the Intel software support for the 8080. It recently has created a state of the art compiler systems for the N Cube Inc systems.

Principal Member of the Technical Staff, Xerox Data Systems (1969 - 1970)

Was responsible for the design and development of a PL/1 implementation for the Sigma computer series. After was Chief Technical manager for Xerox Computer Marketing.

Member of the Technical Staff, the RAND Corporation (1967 - 1969)

Was a principal researcher in several computer graphics projects and created an advanced language extension to the PL/1 family for use in real time control. Was an advisor to the Air Force in several communications based activities as well as software design methodologies.

Supervisor; Systems Programming Department, Bell Telephone Laboratories (1965 - 1966)

Was responsible for the operation of the Holmdel Computer Centers system and applications staff. Was also a key player in Bell Labs activities which lead to the design and implementation of the Multics Operating system. In addition lead a group doing advanced graphics research.

Member of the Technical Staff, Programming Research Department. Bell Telephone Laboratories (1962 - 1965)

Was a co-author of the SNOBOL (1,II and III) programming language. SNOBOL is a major language in the field of string manipulation and several areas in expert systems. Was responsible for the compiler/interpreter for the language.

Member of the Technical Staff, Electronic Switching Engineering Systems Department, Bell Telephone Laboratories (1956 - 1962)

Was one of the system engineers responsible for the design of the world's first

Electronic Switching System. Particular emphasis was toward the software structure and software support infrastructure.

#### ACADEMIC RESEARCH MANAGEMENT

Principal Investigator, Information and Society Project of Annenberg School, University of Pennsylvania on Electronic Commerce (\$200,000)

Co-Principal Investigator and conceptualized, - TeleMentoning: A Novel Approach to Undergraduate Computer Science Education, National Science Foundation 1992-1995 (\$400,000)

Principal Investigator, Aurora Project - A Gigabit Networking Testbed - effort in collaboration with Bellcore Incorporated, IBM Research Laboratories and MIT's Laboratory for Computer Science, National Science Foundation and Darpa (1989-present) (\$1,000,000)

Principal Investigator, Very High Speed Switching Studies - Project DAWN - Bellcore and the Bell Regional Companies (1988- present) (effort in collaboration with Bellcore Incorporated and MIT's Laboratory for Computer Science) (\$450,000)

Principal Investigator, Networking studies, AT&T Bell Labs 1990-1992 (\$150,000)

Principal Investigator, Project Mirage Darpa (1990-1991) studies in the formulation of high latency networking problems and models (\$300,000)

Principal Investigator ( Joint with Robert Kahn - CNRI), Study in Very High Speed Networking, National Science Foundation (1988 - 1989) (\$50,000)

Director, Distributed Systems Laboratory, University of Pennsylvania (1988 - )

Director, Center for Networking Technology and Applications, University of Delaware (1987 - 1988)

Principal Investigator, Bitnet Modernization, National Science Foundation (1986-1988) [\$100,000]

Principal Investigator, Memnet, Northrop Corp. (1986 - 1988) [\$200.000]

Conceived and developing the MEMNET local network which includes complete software support (a NRTC cooperative research effort)

Co-Director, Educational Technologies Laboratory, University of Delaware (1985 - 1988)

A Laboratory devoted to the application of computers to the university functions with the main emphasis on ways of improving the productivity of the faculty.

Principal Investigator; Internet Mail Relays, ARPA IPTO (1983-1984)

Principal Investigator; CSNET Phonenet and CSNET Relay, National Science

Foundation (1981-1985) [\$700,000]

Conceived and developed the Phonenet system and Relay for CSNET and designed and implemented the MMDF system that implemented it.

Principal Investigator; Computer Message Services, U.S. Army DARCOM (1979-1984) [\$60,000]

Principal Investigator; Oversceing of Distributed Processing Systems, National Science Foundation (1977-1980) [\$65,000]

Applying software design methodology to the monitoring of real time distributed systems. Developed the idea of the Overseer -- a monitoring environment.

Principal Investigator; Research in Distributed Processing and Office Systems, General Business Systems Division of IBM (1977-1980) [\$450,000]

Developed SODS -- a capability based distributed software system for a new processor architecture. SODS is currently in heavy use at Bellcore.

Principal Investigator: Local Network Architecture, Advanced Research Projects Agency, Department of Defense (1976-1978) [\$80,000]

Developed the prototype of the LNI -- the r&d version of the Proteon Token Ring and the for-runner of the IBM ring

Principal Investigator; Audio Conferencing. The Institute for the Future (1974-1977) (\$100,000)

Principal Investigator; Network Security and Secure Protocols, Advanced Research Projects Agency, Department of Defense (1974-1977) (\$300,000)

Principal Investigator; Distributed Computer Project, National Science Foundation (1971 - 1975) (\$1,200,000 -- the first such large award in computer science at the NSF)

A pioneering effort in the design of a fully distributed operating system with the first example of message passing and the first fully distributed token ring.

#### International Activities

Active in collaborative activities to establish an international testbed involving the CEC, the USA and Japan

Involved in coordination activities involving networking in Japan and have been credited by key people in Japan as being the Grandfather of Japanese networking.

Actively involved in a multimedia experiment involving Fokus Germany and the Univ of Pennsylvania

## **EDUCATION**

University of Pennsylvania MA (honorary), 1988

Stevens Institute of Technology BSEE, 1956

Stevens Institute of Technology, MS in Math, 1962

Bell Telephone Laboratorics Communication Development Program, 1963 (Equivalent to MS in EE)

## HONORARY APPOINTMENTS

Fellow of the IEEE

Fellow of the Glocom Insitute of Japan

Visiting Lecturer of the ACM

Distinguished Visitor of the IEEE

Traveling Lecturer of the International Computer Communications Council and the International Telecommunications Union

Distinguished Visitor of the IEEE Computer Society

Appointed to the Philadelphia Academy of Sciences

## APPOINTMENTS (partial)

Program Committee INET 93 and 94 and IFTPS 94 and ICCC 95

Study Committee of the OECD on International Aspects of the HPCC.

Scientific Advisory Board of the Swedish Institute of Computer Science and the Royal Institute of Technology (1994-present)

Chairman of the Advisory Board - the First Internet Society Conference - TNet '92

Member of the Board of Directors of the ISODE Corporation (1992 - 1993)

Member of the Board of Directors of the Electric Frontier Foundation (1991 - )

Chairman of the Selection Committee for the Kobayashi Award of the IEEE (1990)

Member of the Board of Governors of the Academy of Sciences in Philadelphia (1989 -

Board on Computer Science and Telecommunications of the National Research Council (1991 - 1995)

Member of the Board of Trustees of the Corporation for Research and Educational Networking (1989 - 1991)

Policy Advisory Board. Chairman of the Networking Subcommittee, National Science Foundation, Office of Advanced Scientific Computing and Division of Network Research (1987 - 1989)

Board on Telecommunications & Computer Applications, National Research Council (1986 - 1990)

Founding Chairman of the Network Program Advisory Group (NPAG), Network Research and Infrastructure, NSF (1985 - 1987)

Active as a founder and technical manager of CSNET. On the CSNET Management Committee since the beginning.

Chairman; CSNET Executive Board, UCAR (1986 - 1988)

Past activities have included the SHARE Executive Board; The Fortran Standards Board; PL/1 Standards Board; etc.

#### HONORARY SOCIETIES

Fellow of the IEEE

Sigma Xi

#### Editorial Boards

Editorial Board, Computer Networks (1980-1988)

Editorial Board, IFIPS Compact Journal (1983-1988)

Editor Series in Innovative Computing, Prentice-Hall (1987 -)

## Recent Invited Addresses (selected) (last three years)

Distinguished Visitor University of British Columbia Communications Series (1991)

External Opponent - Hulsinki University of Technology, Esbo Finland (1991)

Distinguished Visitor of the University of California at San Diego (1992)

Keynote Speaker International Workshop on Advanced Communications and

Applications for High Speed Networks in Munich Germany (1992) Banquet Speaker IFIPS WG6 Vancouver Canada (1992)

Distinguished Lecturer, University of California at San Diego [1992]

Keynote Speaker, Technical University of Finland, [1993]

Invited Speaker Ministry of Post and Telecommunications Annual Conference Tokyo [1993]

Guest Speaker, Glocom Conference Oita Japan [1993]

Invited keynoter, Distributed Cooperative Systems Conference Tokyo Japan 1993

Featured Speaker at the GMD Annual Conference [1994]

## Panelist and Speaker

INet '92 Panelist - Future of the Internet

The EFF/ACLU Roundtable on Privacy and Ethics on the Electronic Frontier
The NRC Roundtable on System Integration
The First Conference on Computers, Privacy and Freedom Burlingame Ca
panclist
The IEEE Optical Switching Conference Montercy Ca - Speaker
Keynote Speaker, Student Pugwash, Philadelphia PA
Harvard School of Government Conference on the NREN

#### **Invited Speaker**

Intel Corporation - internal technology series (twice)
HP Laboratories
IBM Research Hawthorne
Finland Telecom
HaL Computing
Stanford University
University of British Columbia
University of Newcastle upon Tyme
University of Sydney
University of Melbourne
University of New Zealand
Keio University (Science Campus)
CEC Annual Conference Brussets
University of Tokyo
Technical University of Helsinkl

#### Patents Awarded

.Patent No. 5,329,623 awarded July 12th, 1994. "Apparatus for Providing Cryptographic Support in a Network," Jonathan M. Smith, C. Brendan S. Traw, and David J. Farber

Patent No. 5,353,419 awarded 10/4/94 "An Active Instruction Decoding Processor-Memory Interface" J. Touch and D. Farber

SELECTED PUBLICATIONS ( \* - student co-author(s))

#### Books

The Office of the Future: Communication and Computers, R.P. Uhlig, D.J. Farber and J.H. Bair, North Holland Press, 1979.

#### NATIONAL REPORTS

Realizing the Information Future, National Research Council, 1994.

Toward a National Research Network, National Research Council, 1988

Transport Protocols for Department of Defense Data Networks, National Research Council, 1984.

Report on the Evolution of a National Supercomputer Access Network - Sciencenet,

National Science Foundation, 1984.

#### Journal Articles

SNOBOL, A String Manipulation Language, Co-authored with R.E. Griswold and I.P. Polonsky, Journal of the ACM, 1964.

SNOBOL 3, Co-authored with R.E. Griswold and I.P. Polonsky, Bell System Technical Journal, 1966.

APAREL - A Parse Request Language, Co-authored with R. Balzer, Communications of the ACM, 1969.

Software Considerations in Distributed Architectures, D.J. Farber, IEEE COMPUTER Magazine, vol. 7, pp.31-35, 1974.

A Parallel Mechanism for Detecting Curves in Pictures, P.M. Merlin \* and D.J. Farber, IEEE Transactions on Computers, vol.24, pp.96-98, 1975.

Recoverability of Communication Protocols - Implications of a Theoretical Study, P.M. Merlin \* and D.J. Farber, IEEE Transactions on Communications, vol.24, pp. 1036-1043, 1976

The Convergence of Computing and Telecommunications Systems, D.J. Farber and P. Baran, SCIENCE, Special issue on Electronics, vol. 195, pp.1166-1170, 1977. Invited Article. (Also published in #5 of the AAAS Science Compendia, 1978.)

The National Research Network, D.Jconings, L. Landweber, I. Fuchs, R. Adrion, D. Farber, SCIENCE Feb 28, 1986. Invited article.

The World of Computer Networking in the 1990's, International Congress of Radio Sciences, Israel 1987

#### Conference and other papers

Farber, D.J. "A Survey of Computer Networks." Datamation 18, 4 (April 1972), 36-39.

Farber, D.J. and F.R. Heinrich. "The Structure of a Distributed Computer System -- The Distributed File System." Proc. International Conference on Computer Communications, (Oct. 1972), 364-370.

Farber, D.J., M.D. Hopwood, and L.A. Rowe. "Fuil-Soft Behavior of the Distributed Computer System." Technical Report #24, Department of Information and Computer Science, University of California, Irvine, California, (November 1972).

Farber, D.J. and K. Larson. "The Structure of a Distributed Computer System — The Communications System." Proc. Symposium on Computer-Communications Networks and Teletraffic, Microwave Research Institute of Polytechnic Institute of Brooklyn, (April 1972).

Loomis, D.C. "Ring Communication Protocols." UC Irvine Distributed Computer Project, Memo 46-A, (May 1972).

Farber, D.J., J. Feldman, F.R. Heinrich, M.D. Hopwood, K.C. Larson, D.C. Loomis, and L.A. Rowe. "The Distributed Computing System." Proc. Seventh Annual IEEE Computer Society International Conference, (Feb. 1973), pp. 31-34.

Rowe, L.A., M.D. Hopwood, and D.J. Farber. "Software Methods for Achieving Fail-Soft Behavior in the Distributed Computing System." 1973 IEEE Symposium on Computer Software Reliability, (April 30, May 1-2, 1973), pp. 7-11.

Mockatetris, P., Lylc, M. and Farber, D. "On the Design of Local Network Interfaces", IFIPS 1977

Sincoskie, W. and Farber, D. "The Series/1 Distributed Operating Syste", Local Networks Conference 1981

Farber, D. "An Overview of Distributed Processing Aims," 1974 COMPCON.

Merlin, P., Farber, D. "Recoverability of Communications Protocols - Implications of a Theoretical Study" IEEE Transactions on Communications 1976

Farber, D. "Software Considerations in Distributed Architecture." COMPUTER 1974 (March).

Farber, D. "Information Engineering Perspectives". The NSF Conference on Information Technology, 1978

Farber, D., Caine, S. "A Modular Office System", MICRODELCOM 1978

Von Glahn, P., Farber, D. and Walker, S. "The Trusted Office of the Future", Compcon '84

Many additional conference and symposium papers.

#### Current Papers

"CapNet - An Alternate Approach To Ultra-high Speed Networks", Ming-Chit Tam, David J. Farber International Communications Conference, April 90, Atlanta Georgia.

"A Taxonomy Comparison of Serveral Distributed Shared Memory Systems" Ming-Chit Tam, Jonathan Smith, David J. Farber. ACM Operating Systems Review, June 1990.

"Mirage: A Model for Ultra High-Speed Protocol Analysis and Design" Joseph D. Touch and David J. Farber Proceedings of the IFIP WG 6.1/WG 6.4 Workshop on Protocols

for High-Speed Networks, Zurich, Switzerland, 9-11 May 1989 also avail as: UPenn Dept of CIS Tech report MS-CIS-89-79, DSL-1, Dec.1989. This is under revision for IEEE Computer:

"The Mether System: A Distributed Shared Memory for SunOS 4.0" Ronald G. Minnich and Dave Farber Usenix- Summer 89

"Reducing Host Load, Network Load, and Latency in a Distributed Shared"

Memory Ronald G. Minnich and David J. Farber Proceedings of the Tenth (IEEE) Distributed Computing Systems Conference 1980

"The Gigabit Network -- does it fill a much needed gap?" presented as a Keynote and published in the proceedings of the International Workshop on Advanced Communications and Applications for High Speed Networks March 16 - 19 1992 in Munich Germany

#### SELECTED CONSULTING

Advisory Boards of Metricom, Com21, AOL and RadioMail.

Institute for Defense Analysis, Networks and Distributed processing (1991 - present) (continuing)

INTEL Corporation, Future LSI microprocessor organization and future business strategy (continuing) (1976 - present)

Hewlett Packard Research Labs and Corporate Engineering, Communications technology and office systems (1977 - present)

Ballistic Missile Defense Advanced Technology Center, High availability distributed systems (1975)

Bell Northern Research Laboratories (Canada), Office systems and high level protocols (1979)

The Federal Communications Commission, Office systems (1980)

1.J. Watson Research Labs of IBM, Communications, computer architecture and office systems (several periods from 1976 to 1990)

Northrop Research and Technology Centers - communication systems (1985-1988)

The Rand Corporation - communications (1967-1984)

# ADDDITIONAL PUBLICATIONS OF DAVID J. FARBER

Security for Virtual Private Intranets
William A. Arbaugh
James R. Davin
David J. Farber
Jonathan M. Smith

Cover Feature

IEEE Computer (Special Issue on Broadband Networking Security) September 1998

Extensions to the PL/1 Language for Interactive Computer Graphics R. H. Anderson D. J. Farber RAND Corporation

Santa Monica, CA

RAND-RM-6028

Jan. 1970

A Secure and Reliable Bootstrap Architecture William A. Arbaugh David J. Farber Jonathan M. Smith

IEEE Security and Privacy Conference
(An early version available as Technical Report MS-CIS-96-35, CIS Dept., University of Pennsylvania, December 2nd, 1996)
May, 1997
Oakland, CA

Automated Recovery in a Secure Bootstrap Process W. A. Arbaugh A. D. Keromytis D. J. Farber J. M. Smith

Internet Society 1998 Symposium on Network and Distributed System Security March 11-13 1998 San Diego, CA 1998 State Caching in the EROS Kernel: Implementing Orthogonal Persistence in a Pure Capability System
Jonathan S. Shapiro
David J. Farber
Jonathan M. Smith

Persistent Object Systems: Principles and Practice Morgan Kaufmann Richard Connor Scott Nettles 1997

(Presented at 7th Workshop on Persistent Object Systems May, 1996) The Measured Performance of a Fast Local IPC Jonathan S. Shapiro David J. Farber Jonathan M. Smith

Proceedings of the 5th International Workshop on Object Orientation in Operating Systems Seattle, WA
November 1996

Gigabit Object Network Hyogon Kim David J. Farber

Proceedings of IEEE Military Communication Conference (MILCOM '92) San Diego September 1992

The Failure of Conservative Congestion Control in Large Bandwidth-Delay Product Networks Hyogon Kim
David J. Farber

Proceedings of International Networking Conference (INET '95) Waikiki, Hawaii June, 1995

A New Congestion Control: Framework for Large Bandwidth-Delay Product Networks Hyogon Kim David J. Farber Proceedings of IFIP 6th International Conference on High Performance Networking (HPN) Palma, Spain Sept., 1995.

The Convergence of Computers and Communications - Part 2 David J. Farber

ACM SIGCOMM Award Lecture August 30, 1995 Cambridge, MA

Recoverability of Modular Systems P. M. Merlin D. J. Farber

Proceedings of the ACM SIGCOMM/SIGOPS Interprocess Communications Workshop Santa Monica, CA March 24-25, 1975

A Note on Recoverability of Modular Systems P. M. Merlin D. J. Farber

AFIPS Conference Proc. of the Nat. Comp. Conference 1975

Recoverability of Communication Protocols: Implications of a Theoretical Study P. M. Merlin D. J. Farber

IEEE Trans. Comm. COM-24 Sept. 1976

On the Recovery of Communication Protocols P. M. Merlin D. J. Farber 1976 IEEE International Conference on Communications
Graph Modeling of Computer Communications Protocols
J. Postel
D. J. Farber

Proc. of the Fifth Texas Conference on Computing Systems Austin, TX University of Texas October, 1976

Apparatus for Providing Cryptographic Support in a Network Jonathan M. Smith C. Brendan S. Traw David J. Farber U.S. Patent No. 5,329,623 July 12th, 1994 Filing Date: June 12th, 1992

A Tale of Two Major Networking Problems - One Organizational and One Technical David J. Farber
The Harvard Information Quarterly
Fall 1989

Gigabit Telerobotics: Applying Advanced Information Infrastructure Ruzena Bajcsy David J. Farber Richard P. Paul Jonathan M. Smith August 1994

1994 International Symposium on Robotics and Manufacturing Maui, HI

AURORA: An experiment in Gigabit Network Technologies
Bruce S. Davie
Jonathan M. Smith
David D. Clark
David J. Farber
Inder S. Gopal
Roch Guerin
W. David Sincoskie
David L. Tennenhouse
Ahmed N. Tantawy

High Performance Communications Kluwer Academic Publishers January 1993

Cryptographic Support for a Gigabit Network Jonathan M. Smith C. Brendan S. Traw David J. Farber

Proceedings, INET '92
June 15-18, 1992
Kobe, JAPAN
(Inaugural Conference of the Internet Society)

Traffic Characteristics of a Distributed Memory System Jonathan M. Smith David J. Farber

Computer Networks and ISDN Systems September 1991

Memory as a Network Abstraction Gary Delp David Farber Ronald Minnich Jonathan M. Smith Ming-Chit Tam July, 1991

Memory as a Network Abstraction
Gary Delp
David Farber
Ronald Minnich
Jonathan M. Smith
Ivan Ming-Chit Tam
Thomas L. Casavant
Mukesh Singhal
1994
IEEE CS Press, Order Number 3032
(revised version of IEEE Network paper)
Piscataway, NJ

Readings in Distributed Computing Systems

The AURORA Gigabit Testbed

David D. Clark

Bruce S. Davie

David J. Farber

Inder S. Gopal

Bharath K. Kadaba

W. David Sincoskie

Jonathan M. Smith

David L. Tennenhouse

Computer Networks and ISDN Systems

North-Holland

January 1993

# An Overview of the AURORA Gigabit Testbed

D. D. Clark

B. S. Davie

D. J. Farber

I. S. Gopal

B. K. Kadaba

W. D. Sincoskie

J. M. Smith

D. L. Tennenhouse

Proceedings, INFOCOM 1992

Florence, ITALY

1992

The Series/1 Distributed Operating System: Description and Comments

W. David Sincoskie

David J. Farber

Proceedings, 21st IEEE Computer Society International Conference

September 23-25, 1980

Fall COMPCON (Distributed Computing)

The Trusted Office of the Future

Peter G. Von Glahn

David J. Farber

Stephen T. Walker

Proceedings of the COMPCON '84
Twenty-Eighth IEEE Computer Society
International Conference
February 27 - March 1 1984

CapNet - An Alternative Approach to Ultra High Speed Networks Ivan Ming-Chit Tam David J. Farber.

Proceedings, International Communication Conference '90 April 1990
Altanta, GA

Mirage: A Model for Ultra High-Speed Protocol Analysis and Design Joseph D. Touch David J. Farber

Proceedings, Workshop on Protocols for High-Speed Networks Zurich May 1989

Reducing Host Load, Network Load, and Latency in a Distributed Shared Memory Ronald G. Minnich
David J. Farber

Proceedings, 10th International Conference on Distributed Computing Systems Paris, France
June 1990

A Taxonomy-Based Comparison of Several Distributed Shared Memory Systems Ming-Chit Tam
Jonathan M. Smith
David J. Farber

ACM Operating Systems Review July, 1990

An Analysis of Memnet: An Experiment in High-Speed Shared-Memory Local Networking Gary Delp Adarshpal Sethi David Farber Proceedings, SIGCOMM'88 Symposium Stanford August, 1988

The Distributed Computer System (DCS): Its Final Structure Paul V. Mockapetris
David J. Farber
University of California, Irvine
Technical Report
1977
Mockapetris\ &\ Farber\ 1977

Experience with the Distributed Computer System (DCS)
Paul V. Mockapetris
David J. Farber
University of California, Irvine
Technical Report 116
1977
Mockapetris\ &\ Farber\ 1977

The Distributed Computing System David J. Farber Proceedings, 1973 COMPCON IEEE 1973

Networks: An Introduction
David J. Farber
Datamation
April 1972

Reprinted in IEEE CS tutorial on Distributed Processing (3rd ed.)

The Architecture of a Distributed Computer System- An Informal Description David J. Farber

K. Larson

Technical Report Number 11

Department of Information and Computer Science,

University of California, Irvine

1970

Cited in R. Kahn's Nov. 1972 Proc. IEEE article "Resource-Sharing Networks"

Ronald G. Minnich

David J. Farber

Mether: A Distributed Shared Memory for SunOS 4.0

Proc. 1989 Summer USENIX Conference

San Francisco, California

June 1989

J. R. Pickens

D. J. Farber

The Overseer: A Powerful Communications Attribute for Debugging and Security in Thin-Wire Connected Control Structures
Proceedings, International Computer Communications Conference
also TR #75, UC Irvine, 1975

August, 1976